



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

Street address: 629 East Main Street, Richmond, Virginia 23219

Mailing address: P.O. Box 1105, Richmond, Virginia 23218

TDD (804) 698-4021

www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

April 11, 2011

Mr. Bryan Foster
Director of Utilities/Works
City of Portsmouth
POB 490
Portsmouth, VA 23705-0490

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

RE: Modification of Virginia Water Protection Permit No. 07-1194
Proposed Lake Kilby Water Treatment Improvements, Suffolk, VA

Dear Mr. Foster:

The Virginia Department of Environmental Quality (DEQ) received your request dated March 11, 2011 to change the construction method by which the intake structures in Lakes Kilby and Meade will be installed, namely via a wet concrete pour. DEQ received the Water Quality Management Plan for Lake Kilby & Lake Meade on April 6, 2011 and approved such plan on April 7, 2011.

Pursuant to the VWP Permit Program Regulation 9VAC25-210-180, the §401 of the Clean Water Act Amendments of 1977, and Public Law 95-217, DEQ has determined that this request qualifies for a Minor Modification. Part I.C.10 of the permit Special Conditions has been revised to incorporate the approved monitoring plan. Additionally, typographical errors were corrected on the Cover Page.

Please replace the original permit pages with the attached revised pages. Also, please note that this letter is an official component of the permit and should be retained in your files.

Should you have any questions, please contact me at (804) 698-4516 or brenda.winn@deq.virginia.gov.

Sincerely,

A handwritten signature in black ink that reads "Brenda Winn".

Brenda K. Winn
VWP Water Withdrawal Project Manager

Enclosures: Modification Cover Page, Modified Part I Special Conditions

cc via electronic mail: Pam Painter, USACE
Ben Stagg, Virginia Marine Resources Commission
Amy Ewing, Virginia Department of Game and Inland Fisheries



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VWP Individual Permit Number 07-1194

Effective Date: October 17, 2007

Modification Date: April 11, 2011

Expiration Date: October 17, 2022

VIRGINIA WATER PROTECTION PERMIT MODIFIED PURSUANT TO THE STATE WATER CONTROL LAW AND SECTION 401 OF THE CLEAN WATER ACT

Based upon an examination of the information submitted by the owner, and in compliance with § 401 of the Clean Water Act as amended (33 USC 1341) and the State Water Control Law and regulations adopted pursuant thereto, the State Water Control Board (board) has determined that there is a reasonable assurance that the activity authorized by this permit, if conducted in accordance with the conditions set forth herein, will protect instream beneficial uses and will not violate applicable water quality standards. The board finds that the effect of the impact, together with other existing or proposed impacts to surface waters, will not cause or contribute to a significant impairment to state waters or fish and wildlife resources.

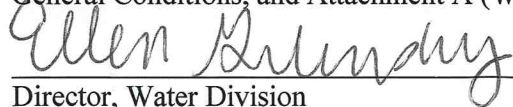
Permittee: City of Portsmouth, Department of Public Utilities/Works

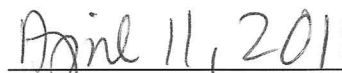
Address: POB 490, Portsmouth, VA 23705

Activity Location: Lake Kilby and Lake Meade Reservoirs in Suffolk, VA.

Activity Description: Replace City of Portsmouth's existing raw surface water withdrawal and pumping systems, located adjacent to the existing Lake Kilby Water Treatment Plant, including: decommission the existing Lake Meade pumping station and intake; demolition the existing Lake Kilby pumping station and intake; abandonment of portions of all water transfer pipelines to the treatment plant; construction of a new Lake Kilby pump station; construction of a new intake structure offshore in Lake Meade with pipeline connection to the new Lake Kilby pump station; construction of a new intake structure offshore in Lake Kilby with pipeline connection to the new Lake Kilby pump station; installation of two new discharge pipelines from the new pump station, connecting to the water treatment plant; continued operation of the Pitchkettle intake and pump station on Lake Meade. Temporary impacts consist of 0.003 acres emergent wetlands at Lake Meade, and 0.159 acres subaqueous bottom at Lakes Kilby and Meade. Maximum daily withdrawal from one or more sources shall be 32 million gallons per day with a maximum annual withdrawal of 11,680 million gallons.

The permitted activity shall be in accordance with this Permit Cover Page, Part I - Special Conditions, Part II - General Conditions, and Attachment A (Water Use Restrictions)


Director, Water Division


Date April 11, 2011

A. *Authorized Activities*

This permit authorizes the following impacts, as described in: the Joint Permit Application dated May 17, 2007, received by DEQ on May 23, 2007, and deemed complete by DEQ on June 26, 2007.

1. The temporary excavation of 150 square feet of emergent wetlands and 6,900 square feet (0.16 acres) of subaqueous bottom for the installation of the new Lake Kilby and Lake Meade off-shore intake structures and associated intake pipelines, provided all work complies with the special conditions of Parts I.C and I.D. DEQ shall be notified of any additional permanent or temporary impacts based on the final construction design and implementation plans prior to the beginning of project construction. Appropriate compensatory mitigation may be required for any permanent impacts.
2. The withdrawal of surface water from Lake Kilby, Lake Meade, or both lakes, such that the combined total withdrawal shall not exceed a maximum *daily* withdrawal volume of 32 million gallons. Authorization of this withdrawal shall also be subject to the conditions in Part I.E below.
3. The continued operation of the Pitchkettle pump station and intake structure, not to exceed a surface water withdrawal of 32 million gallons per day, either independent of other intakes in Lake Kilby and Lake Meade, or in combination with such intakes.

B. *Permit Term*

This permit is valid for 15 years from the date of issuance. If the permittee desires to continue the water withdrawal activities authorized by this permit after it expires, a new application must be submitted to DEQ at least 180 days prior to the expiration of this permit. The application will be evaluated by DEQ based on the regulations and laws in effect at that time.

C. *Conditions Applicable to All Project Construction Activities*

1. The activities authorized by this permit shall be executed in such a manner that any impacts to stream beneficial uses are minimized. As defined in § 62.1-10(b) of the Code, "beneficial use" means both instream and offstream uses. Instream beneficial uses include, but are not limited to, the protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. Offstream beneficial uses include, but are not limited to, domestic (including public water supply), agricultural, electric power generation, commercial, and industrial uses. Public water supply uses for human consumption shall be considered the highest priority.

2. Permanent and temporary disturbances to wetlands, stream channels, and shorelines during project construction activities shall be avoided and minimized to the maximum extent practicable.
3. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species that normally migrate through the area, unless the primary purpose of the activity is to impound water.
4. No activity shall cause more than minimal adverse effect on navigation, and no activity shall block more than half of the width of a stream or water body at any given time.
5. The activity shall not impede the passage of normal or expected high flows, and any associated structure shall withstand expected high flows.
6. Flows downstream of the project area shall be maintained to protect all uses.
7. Temporary construction features, such as cofferdams, that are placed in surface waters shall be made of non-erodible materials.
8. All excavation in, dredging in, or filling of surface waters shall be accomplished in a manner that minimizes bottom disturbance and turbidity. Turbidity levels downstream of any construction sites shall be minimized to the greatest extent practicable at all times.
9. Erosion and sedimentation controls shall be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, or the most recent version in effect at the time of construction. These controls shall be placed prior to clearing and grading activities and shall be maintained in good working order, to minimize impacts to surface waters. These controls shall remain in place only until clearing and grading activities cease and these areas have been stabilized.
10. All construction, construction access, and demolition activities associated with this project shall be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters. Wet concrete shall be authorized for use in accordance with the Water Quality Management Plan for Lake Kilby & Lake Meade dated April 6, 2011, as approved by DEQ on April 7, 2011. Excess or waste concrete shall be prohibited from entering surface waters. Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters. Any fish kills, or spills of fuels or oils, shall be reported to DEQ immediately upon discovery at (540) 574-7800. If DEQ cannot be reached, the spill shall be reported to the Virginia Department of Emergency Management (DEM) at 1-800-468-8892 or the National Response Center (NRC) at 1-800-424-8802. DEQ shall be notified in writing *within 24 hours or as soon as possible on the next business day* when potential

environmentally threatening conditions are encountered which require debris removal or involve potentially toxic substances. Measures to remove the debris or potentially toxic substance, or to change the location of any structure, are prohibited until approved by DEQ. Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities.

11. All authorized fill material placed in surface waters shall be clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations.
12. Machinery or heavy equipment used in temporarily impacted wetlands shall be placed on mats or geotextile fabric, or other suitable means shall be implemented to minimize soil disturbance to the maximum extent practical. Mats, fabrics, or other measures shall be removed as soon as the work is completed in the temporarily impacted wetlands.
13. Machinery or heavy equipment used in temporarily impacted surface waters shall be stationed on the shoreline or on temporary floating structures, and the activities conducted in the dry, whenever possible.
14. All materials (including fill, construction debris, excavated materials, and woody materials) that are temporarily placed in wetlands or on shorelines shall be placed on mats or geotextile fabric, and shall be immediately stabilized to prevent the materials, or leachate associated with the materials, from entering surface waters. The materials shall be entirely removed within 30 calendar days following completion of that construction activity. After removal, disturbed areas shall be restored to pre-existing conditions (except for mature woody vegetation) in accordance with Part I.G.
15. All non-impacted wetlands, streams, and designated upland buffers that are located within fifty feet of any project activities shall be clearly marked or flagged for the life of the construction activity within that area. Construction limits in open water may be marked with temporary buoys, provided that they meet any navigational standards required by federal, state, or local law, regulations, or ordinances. *The permittee shall notify all contractors and subcontractors that no activities are to occur within these marked, land-based non-impact areas, or outside of marked construction limits in open water.*
16. All required notifications and submittals shall be submitted to the DEQ office stated below, to the attention of the VWP permit manager, unless directed in writing by DEQ subsequent to the issuance of this permit:

Virginia Dept. of Environmental Quality
Office of Wetlands and Water Protection
P. O. Box 1105
Richmond, Virginia 23218

17. All reports required by this permit and other information requested by DEQ shall be signed by the permittee or a person acting in the permittee's behalf, with the authority to bind the permittee. A person is a duly authorized representative only if *both* criteria below are met. If a representative authorization is no longer valid because of a change in responsibility for the overall operation of the facility, a new authorization shall be immediately submitted to DEQ.
 - a. The authorization is made in writing by the permittee.
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.
18. All submittals shall contain the following signed certification statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
19. The permittee shall notify the DEQ of any additional impacts to surface waters, including wetlands, and of any change to the type of surface water impacts associated with this project. The permittee shall also notify the DEQ of any modifications to the design or configuration of intake structures, support piles and piers, pumping stations, or pipelines. Any additional impacts, modifications, or changes shall be subject to individual permit review and/or modification of this permit. Compensation may be required.

D. *Utilities*

1. All utility line work in surface waters shall be performed in a manner that minimizes disturbance in each area. Temporarily disturbed surface waters shall be restored in accordance with the conditions of Part I.G, unless otherwise authorized by this permit.

2. Material resulting from trench excavation may be temporarily sidecast into wetlands not to exceed a total of 90 calendar days, provided the material is not placed in a manner such that it is dispersed by currents or other forces. Material resulting from trench excavation through subaqueous bottom may be sidecast within the temporary confining structure, such as a cofferdam, provided the material is not placed in such a manner that it is dispersed by currents or other forces and that is removed in its entirety prior to removal of the confining structure.
3. The trench for a utility line cannot be constructed in a manner that drains wetlands (e.g., backfilling with extensive gravel layers creating a French drain effect).

E. *Water Withdrawal Conditions*

1. The maximum annual, combined withdrawal from one or more intakes in Lake Kilby or Lake Meade shall not exceed 11,680 million gallons.
2. The maximum screen mesh size on newly constructed intakes shall not exceed 1/8 of an inch (0.125 inches, or 3.175 mm).
3. The maximum through-screen water velocity on newly constructed intakes shall not exceed 0.5 feet per second.
4. The permittee shall install a meter at each newly constructed intake to measure the amount of water withdrawn from Lake Kilby and Lake Meade.
5. In the event that the Governor or the Virginia Drought Coordinator declares a drought emergency in the Southeast Virginia Drought evaluation Region, which includes, but is not limited to, Suffolk County, the City of Portsmouth, and the City of Suffolk, the permittee shall implement the mandatory conservation measures, as detailed in Attachment A of this permit. The permittee shall be responsible for determining when drought emergencies are declared. DEQ may require documentation that mandatory conservation measures were implemented during declared drought emergencies.

F. *Project Construction Monitoring and Submittals for Project Surface Water Impact Sites*

Project Pre-Construction Monitoring and Submittals

1. Final construction plans for the project activities authorized by this permit shall be submitted 30 calendar days prior to initiating any land disturbance or construction in permitted impact areas. Construction activities shall not be initiated until DEQ has reviewed and commented on the plans, or until 30 calendar days have passed without

DEQ comments being received by the permittee. If DEQ submits comments on the final plans, construction shall not proceed until comments are resolved to DEQ's satisfaction. Final construction plans shall include, at a minimum but not limited to, the location of all photographic monitoring stations, as described in Part I.F.4 below. Plan revision(s) in permitted areas shall be submitted to DEQ for approval immediately upon determination that a change is necessary. DEQ approval shall be required prior to implementing the revision(s).

2. Prior to impacting any surface waters as authorized by this permit, the applicant shall submit any existing regional or local water supply conservation plans that apply to the service areas being supplied by the water withdrawn under this permit.
3. At least ten calendar days prior to the initiation of any land disturbance or construction activities in permitted areas, the permittee shall submit written notification to DEQ, including a projected schedule for initiating and completing work at each permitted impact area.
4. The permittee shall conduct photographic monitoring of pre-construction conditions in permitted, temporary or permanent impact areas covered by this permit. The photos shall be of sufficient quantity to thoroughly document the environmental conditions at, or on the surface of, the permitted impact areas prior to disturbance. Photographic monitoring shall be conducted by the following method:

Enumerated photo stations shall be established at each permitted impact area and shall be consistent for the duration of construction activities. Photo stations may be established via water craft or temporary floating structures, provided that they meet any navigational standards required by federal, state, or local law, regulations, or ordinances. Photos will be taken from the same directional orientation during each monitoring event. Each photograph taken shall be labeled with the photo station number, the permitted impact location, the photograph orientation, the date and time of the photograph, the name of the person taking the photograph, and a brief description of the activities being conducted at the time of the photograph. If necessary, this information may be provided on (a) separate sheet(s) of paper attached to the photographs.

Photos shall be submitted with the notification (Part I.F.2) to DEQ that land disturbing or construction activities are planned to begin.

5. Should revisions to the project result in unavoidable permanent impacts to surface waters, a final surface water compensation plan (final plan) may be required. If required, the final plan shall be prepared in accordance with the Virginia Water Protection Permit Program Regulation (9VAC25-210-10 et. seq.) in effect at the time of plan submittal, and

shall be based on the most recent mitigation guidance, if any, posted on DEQ's wetlands web page.

If required, the final plans shall be approved by DEQ *prior to any construction activity in permitted impact areas*. DEQ shall have 60 calendar days to review and either provide written comments on the final plans or approve the final plans. The final plans as approved by DEQ shall be an enforceable requirement of this permit. Any change to the approved final plans must be submitted to DEQ for approval prior to implementing the change.

Monitoring and Submittals Required During Project Construction

6. The permittee shall conduct photographic monitoring of sufficient quantity and frequency to thoroughly document all temporary and permanent construction activities in permitted impact areas. Photos shall also document any non-compliant events or problems encountered during the construction activities. For work being conducted in phases, or only in certain areas at the same time, monitoring may begin upon initiating work in those specific permitted impact areas.

The established, enumerated photo stations in each permitted impact area shall be used for photo monitoring. Photos will be taken from the same directional orientation during each monitoring event. Each photograph taken shall be labeled with the photo station number, the permitted impact location, the photograph orientation, the date and time of the photograph, the name of the person taking the photograph, and a brief description of the activities being conducted at the time of the photograph. If necessary, this information may be provided on (a) separate sheet(s) of paper attached to the photographs.

Photos taken during construction shall be submitted as part of the construction monitoring reports detailed in Part I.F.7.

7. Construction monitoring reports shall be submitted to DEQ monthly, due by the 15th of the following month (for example, a report for January is due by February 15th). The reports shall include the following, as applicable:
 - a. A written narrative stating whether or not work was performed in each permitted impact area, including installation and maintenance of erosion and sediment controls, during the monitoring period. If work was performed, the narrative shall include a description of the major work items performed, when those items were initiated, when those items are expected to be completed, and any non-compliant events or problems encountered.

- b. A written summary of any corrective actions taken and any subsequent notifications to DEQ regarding non-compliant events or problems encountered during construction activities in permitted impact areas.
- c. A summary of anticipated work to be completed during the next monitoring period in all permitted impact areas.
- d. A labeled site map showing each permitted impact area where work activities occurred during the monitoring period and the photo stations used to document activities.
- e. The photos taken during the monitoring period.

Project Post-Construction Monitoring and Submittals

- 8. The permittee shall submit written notification within 30 calendar days after the completion of activities in each permitted impact area authorized under this permit. The notification may be included with monthly construction monitoring reports in cases where work has been completed in one or more permitted impact areas but not completed in others, or the notification may be submitted separately. In either case, notification shall include the post-construction photos of disturbances in the particular permitted impact area(s), as described in Part I.F.9.
- 9. The permittee shall conduct photographic monitoring of sufficient quantity to thoroughly document that all construction activities were completed in permitted impact areas. The established, enumerated photo stations shall be used for photo monitoring. Each photograph taken shall be labeled with the photo station number, the permitted impact location, the photograph orientation, the date and time of the photograph, the name of the person taking the photograph, and the date that activities were completed. If necessary, this information may be provided on (a) separate sheet(s) of paper attached to the photographs.

For temporary disturbances to wetlands, the permittee shall conduct photographic monitoring immediately after restoration, then once annually in August or September for *two consecutive years*. If restoration is not completed by June 30th of a given year, the monitoring should not begin until August or September of the *following* year in order to allow one growing season to pass. If post-restoration conditions are not equivalent to pre-construction conditions after two years (except for mature woody vegetation), DEQ may require corrective action and continued annual monitoring until the temporary impacts are restored.

10. Final As-Built plans shall be submitted to DEQ within 60 days of completing the project. The plans shall include at a minimum, plan views of all completed structures, including pipelines and subsurface components of the project; final contours and elevations; limits of temporarily restored wetland areas; and access roads. Additionally, cross-sectional views shall be included of the intake structures and pump stations, showing at a minimum, final contours of subaqueous bottom and elevations of major project components, such as slabs, screen centerlines, platforms, normal pool, wet wells, etc. A licensed land surveyor or a licensed professional engineer shall certify the plans. The plans shall include a narrative comparing the As-Built plans with the submitted final design plans. DEQ shall have 30 calendar days to review the plans and provide comments to the permittee.
11. Monitoring and Reporting of water withdrawals :
 - a. The permittee shall record the daily volume of water withdrawn through each of the intakes on Lake Kilby and Lake Meade, including the Pitchkettle intake, the newly constructed intake on Lake Kilby, and the newly constructed intake on Lake Meade. In addition to the volume, the person taking the measurement shall record the intake location, the date and time the measurement was taken, his or her name, the number of pumps operational at the time of the measurement.
 - b. *For all permittees whose average daily withdrawal during any single month exceeds 10,000 gallons per day*, the water withdrawals shall be reported to DEQ by January 31st of the next year, as required under State Water Control Board (SWCB) Water Withdrawal Reporting Regulation (9 VAC 25-200 et seq.). The annual monitoring report shall contain the following information: the permittee's name and address, the sources and locations of water withdrawal, the cumulative volume of water withdrawn each month of the calendar year, the maximum day withdrawal and the month in which it occurred, and the method of withdrawal measurement. *For permittees subject to the Virginia Department of Health (VDH) Waterworks Regulations*, the annual reports to DEQ may include, as an alternative, the source and location of water withdrawals, the type of use for the water withdrawn, and reference to the reports filed with VDH that contain the monthly withdrawal data.
 - c. Water withdrawal monitoring and reporting activities shall comply with Part I.C and with Part II.
 - d. All records and information that result from the monitoring and reporting activities required by this permit, including any records of maintenance activities to the withdrawal system, shall be retained for the life of the permit. This period of retention shall be extended automatically during the course of any unresolved litigation regarding the regulated activity or as requested by the State Water Control

Board. DEQ may request any records and information, including withdrawal data, at any time during the effective term of the permit.

G. Compensatory Mitigation

1. All temporarily disturbed wetland areas shall be restored to preconstruction conditions within 30 calendar days of completing work in the areas, which shall include re-establishing pre-construction contours, and planting or seeding with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested), except for invasive species identified on DCR's Invasive Alien Plant Species of Virginia list. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed wetlands for a minimum of two years after the area is restored.
2. All temporarily impacted subaqueous bottom shall be restored to its original elevations and contours immediately upon completion of construction activities conducted within confining structures or conducted from on-shore work areas.
3. Seeds used for all project and compensation activities shall conform to the Virginia Seed Law (Sections 3.1-262 Code of Virginia) and Virginia Seed Regulations (2 VAC 5-390-10 et seq).
4. Should permanent impacts to surface waters occur as a result of the final project designs, compensatory mitigation may be required at appropriate ratios, in accordance with 9VAC25-210 et seq.